What is claimed is:

1. A method for clamping a part in an automated tool to produce the part, the method comprising:

selecting a part for production on an automated tool configured to drive a cutter;

deriving a clamping scenario for positioning a plurality of clamps to fix the part to the automated tool;

generating a numeric controlled cutting program based upon the part and the clamping scenario; and

automatically predicting interferences between the cutter and any of the plurality of clamps.

2. The method of Claim 1, wherein automatically predicting includes simulating running of the numeric controlled program

3. The method of Claim 1, wherein selecting a part for production includes selecting a previously-associated numeric model of the part.

4. The method of Claim 1, wherein the numeric controlled cutting program is generated by a CAD/CAM program.

5. The method of Claim 1, further comprising fabricating the part.

6. The method of Claim 1, wherein deriving a clamping scenario includes deriving a first clamping scenario and a second clamping scenario.

7. The method of Claim 6, wherein generating a numeric controlled cutting program includes generating a first stage numeric controlled cutting program and a second stage numeric cutting program, the first stage numeric controlled cutting program including movement of the cutter with clamps positioned according to the first clamping scenario and the second stage numeric controlled cutting program including movement of the cutter with clamps positioned according to the second clamping scenario.

8. The method of Claim 7, wherein generating a numeric controlled cutting program includes transitioning one or more of the plurality of clamps from positions defined in the first clamping scenario to positions defined in the second clamping scenario.

BLACK LOWE & GRAHAM
701 Fifth Avenue, Suite 4800
Seattle, Washington 98104
206.381.3300 • F: 206.381.3301

9. The method of Claim 8, wherein simulating the running of the numeric controlled program includes:

rederiving the first stage numeric controlled program if simulating indicates a movement causing an interference between the cutter and any of the plurality of clamps to remove the movement from the first stage numeric controlled program; and

rederiving the second stage numeric controlled program to include the movement in the second stage numeric controlled program.

10. The method of Claim 8, wherein deriving the second clamping scenario facilitates the second stage numeric controlled program.

11. A software product stored on a computer readable medium, the software product for commencing an executable instruction set directing an automated tool to machine a part, the software product comprising:

a user-interface stored at a first addressable memory site within a network, the interface including:

a first software component configured to select a part for production on an automated tool configured to drive a cutter;

a second software component configured to derive a clamping scenario for positioning a plurality of clamps to fix the part to the automated tool;

a third software component configured to generate a numeric controlled cutting program based upon the part and the clamping scenario; and

a fourth software component configured to automatically predict interferences between the cutter and any of the plurality of clamps.

12. The software product of Claim 11, wherein the fourth software component is configured to predict interferences by simulating the running of the numeric controlled program.

13. The software product of Claim 11, wherein the third software component is further configured for storing the executable instruction set at an addressable memory site within a network.

14. The software product of Claim 11, wherein the generating of the numeric controlled cutting program is generated by a CAD/CAM program.

BLACK LOWE & GRAHAM
701 Fifth Avenue, Suite 4800
Seattle, Washington 98104
206.381.3300 • F: 206.381.3301

15. The software product of Claim 11, wherein the user-interface further includes a fourth software component configured to initiate the executable program on the automated tool.

16. The software product of Claim 11, wherein the clamping scenario includes a first clamping scenario and a second clamping scenario.

17. The software product of Claim 16, wherein the generating a numeric controlled cutting program includes generating a first stage numeric controlled cutting program and a second stage numeric cutting program, the first stage numeric controlled cutting program including movement of the cutter with clamps positioned according to the first clamping scenario and the second stage numeric controlled cutting program including movement of the cutter with clamps positioned according to the second clamping scenario.

18. The software product of Claim 17, wherein the generating a numeric controlled cutting program includes transitioning one or more of the plurality of clamps from positions defined in the first clamping scenario to positions defined in the second clamping scenario.

19. The software product of Claim 18, fourth computer software component is further configured to:

rederiving the first stage numeric controlled program if the simulating indicates a movement causing an interference between the cutter and any of the plurality of clamps to remove the movement from the first stage numeric controlled program; and

rederiving the second stage numeric controlled program to include the movement in the second stage numeric controlled program.

20. A tool for automatically milling a part, the tool comprising:

a controllable end effector having a chuck configured to accept a cutter, the end effector being configured to mill a part; and

a central processing unit operationally coupled to the end effector, the central processing unit including:

an addressable memory; and

a user-interface stored at a first addressable memory site within the addressable memory, the interface including:

BLACK LOWE & GRAHAM
701 Fifth Avenue, Suite 4800
Seattle, Washington 98104
206.381.3300 • F: 206.381.3301

a first software component configured to select a first clamping scenario, the first clamping scenario being stored at a second addressable site within the addressable memory in association with the identity of the cutter;

a second software component configured to select a name of a part for production, a numeric model of the part being stored at a third addressable site within the addressable memory in association with the name; and

a third software component configured to generate a first executable instruction set based upon the clamping scenario and the selected part and associated numeric model, the third software component being further configured to initiate the first executable program for simulation on the automated tool, the third software component being stored at a fourth addressable site within the addressable memory.

21. The tool of Claim 20, wherein the numeric controlled cutting program is generated by a CAD/CAM program.

22. The tool of Claim 19, wherein the user-interface further includes a fourth software component configured to initiate the executable program on the automated tool.

23. The tool of Claim 19, wherein the memory sites includes sites within an addressable network.

24. The tool of Claim 23, wherein the addressable network includes the Internet.

25. The tool of Claim 19, wherein the third software component is further configured to simulate the movement of the end effector in three-dimensioned space.

26. The tool of Claim 23, wherein the third software component is further configured to:

indicate an instruction that results in an interference between the cutter and one of the plurality of clamps; and

delete the instruction from the first executable instruction set.

27. The tool of Claim 24, wherein:

BLACK LOWE & GRAHAM
701 Fifth Avenue, Suite 4800
Seattle, Washington 98104
206.381.3300 • F: 206.381.3301

the first software component is further configured to select a second clamping scenario; and

the third software component is further configured to generate a second executable instruction set including the instruction deleted from the first executable instruction set.

28. A tool for automatically milling a part, the tool comprising:

a central processing unit; and

a graphic user interface, the graphic user interface including:

a user interface; and

a software program to run on the central processing unit and to receive signals from the user interface, the software including:

a first software component configured to select a part for production on an automated tool configured to drive a cutter;

a second software component configured to deriving a clamping scenario for positioning a plurality of clamps to fix the part to the automated tool;

a third software component configured to generate a numeric controlled cutting program based upon the part and the clamping scenario; and

a fourth software component configured to automatically predict interferences between the cutter and any of the plurality of clamps.

29. The tool of Claim 28, further including a controllable end effector having a chuck configured to accept a cutter, the end effector being configured to mill a part and operationally coupled to the central processing unit.

30. The tool of Claim 28, wherein automatically predicting includes simulating running of the numeric controlled program

31. The tool of Claim 28, wherein selecting a part for production includes selecting a previously-associated numeric model of the part.

32. The tool of Claim 28, wherein the numeric controlled cutting program is generated by a CAD/CAM program.

BLACK LOWE & GRAHAM
701 Fifth Avenue, Suite 4800
Seattle, Washington 98104
206.381.3300 • F: 206.381.3301

33. The tool of Claim 28, the software program further includes a fifth software component configured to control the end effector according to the numeric controlled program to fabricating the part.

34. The tool of Claim 28, wherein deriving a clamping scenario includes deriving a first clamping scenario and a second clamping scenario.

35. The tool of Claim 34, wherein generating a numeric controlled cutting program includes generating a first stage numeric controlled cutting program and a second stage numeric cutting program, the first stage numeric controlled cutting program including movement of the cutter with clamps positioned according to the first clamping scenario and the second stage numeric controlled cutting program including movement of the cutter with clamps positioned according to the second clamping scenario.

36. The tool of Claim 35, wherein generating a numeric controlled cutting program includes transitioning one or more of the plurality of clamps from positions defined in the first clamping scenario to positions defined in the second clamping scenario.

37. The tool of Claim 36, wherein simulating the running of the numeric controlled program includes:

rederiving the first stage numeric controlled program if simulating indicates a movement causing an interference between the cutter and any of the plurality of clamps to remove the movement from the first stage numeric controlled program; and

rederiving the second stage numeric controlled program to include the movement in the second stage numeric controlled program.

38. The method of Claim 37, wherein deriving the second clamping scenario facilitates the second stage numeric controlled program.

39. A tool for automatically milling a part, the tool comprising:

A controllable cutter; and

a central processing unit operationally coupled to the controllable cutter, the central processing unit including:

an addressable memory;

a user interface; and

BLACK LOWE & GRAHAM
701 Fifth Avenue, Suite 4800
Seattle, Washington 98104
206.381.3300 • F: 206.381.3301

a graphic user interface software component stored at a first addressable memory site within the addressable memory; the graphic user interface configured to run on the central processing unit and to receive signals from the user interface, the software including

a first software component configured to select a part for production on an automated tool configured to drive the cutter responsive to signals from the user interface;

a second software component configured to deriving a clamping scenario for positioning a plurality of clamps to fix the part to the automated tool responsive to signals from the user interface;

a third software component configured to generate a numeric controlled cutting program based upon the part and the clamping scenario responsive to signals from the user interface; and

a fourth software component configured to automatically predict interferences between the cutter and any of the plurality of clamps.

40. The tool of Claim 39, wherein automatically predicting includes simulating running of the numeric controlled program

41. The tool of Claim 39, wherein selecting a part for production includes selecting a previously-associated numeric model of the part.

42. The tool of Claim 39, the software program further includes a fifth software component configured to control the cutter according to the numeric controlled program to fabricating the part.

43. The tool of Claim 39, wherein deriving a clamping scenario includes deriving a first clamping scenario and a second clamping scenario.

44. The tool of Claim 39, wherein generating a numeric controlled cutting program includes generating a first stage numeric controlled cutting program and a second stage numeric cutting program, the first stage numeric controlled cutting program including movement of the cutter with clamps positioned according to the first clamping scenario and

BLACK LOWE & GRAHAM
701 Fifth Avenue, Suite 4800
Seattle, Washington 98104
206.381.3300 • F: 206.381.3301

the second stage numeric controlled cutting program including movement of the cutter with clamps positioned according to the second clamping scenario.

45. The tool of Claim 39, wherein generating a numeric controlled cutting program includes transitioning one or more of the plurality of clamps from positions defined in the first clamping scenario to positions defined in the second clamping scenario.

BLACK LOWE & GRAHAM
701 Fifth Avenue, Suite 4800
Seattle, Washington 98104
206.381.3300 • F: 206.381.3301